I claim:

1. A method of detecting the presence or absence of invasive trophoblast cells in a biological sample comprising the steps of:
    a. obtaining a biological sample from a patient;
    b. measuring an amount of hCG in the biological sample;
    c. measuring an amount of ITA in the biological sample; and
    d. determining the percentage of hCG that is ITA, wherein invasive trophoblast cells are detected if the percentage is 30% or greater.
2. The method of claim 1, wherein the hCG is a subunit of hCG.
3. The method of claim 2, wherein the subunit is α hCG or β hCG.
4. The method of claim 1, wherein the hCG is intact hCG.
5. The method of claim 1, wherein the hCG is total hCG.
6. The method of claim 1, wherein the patient is a woman previously diagnosed as having a gestational trophoblastic disease.
7. The method of claim 6, wherein the gestational trophoblastic disease is hydatidiform mole.
8. The method of claim 6, wherein the gestational trophoblastic disease is choriocarcinoma.
9. The method of claim 6, wherein the gestational trophoblastic disease is placenta-site trophoblastic tumor.
10. The method of claim 1, wherein the biological sample is urine, saliva, plasma, or serum.
11. The method of claim 10 wherein the biological sample is urine.
12. A method of diagnosing quiescent gestational trophoblastic disease in a patient comprising the method of claim 1, wherein the patient has persistently low hCG

titers, and wherein quiescent gestational trophoblastic disease is diagnosed if the percentage of hCG that is ITA determined in step (d) is less than 30%.

13. The method of claim 12, wherein the patient is a woman previously diagnosed as having a gestational trophoblastic disease.

14. The method of claim 13, wherein the gestational trophoblastic disease is hydatidiform mole.

15. The method of claim 13, wherein the gestational trophoblastic disease is choriocarcinoma.

16. The method of claim 13, wherein the gestational trophoblastic disease is placenta-site trophoblastic tumor.

17. A method of detecting the presence or absence of invasive trophoblast cells in a biological sample comprising the steps of:

    a. obtaining a biological sample from a patient; and

    b. measuring an amount of ITA in the biological sample; wherein invasive trophoblast cells are detected if the amount of ITA in the biological sample is 2 IU/L or greater.

18. A method of monitoring the progression of quiescent gestational trophoblastic disease comprising the steps of:

    a. obtaining a biological sample from a patient diagnosed as having quiescent gestational trophoblastic disease;

    b. measuring an amount of hCG in the biological sample;

    c. repeating steps (a) and (b) with a biological sample obtained at subsequent time points;

    d. measuring an amount of ITA in a biological sample from step (c) if the amount of hCG in a biological sample from step (c) is higher than the amount of hCG in step (b); and

e. determining the percentage of hCG that is ITA in the biological sample from step (d).

19. The method of claim 18, wherein the hCG is a subunit of hCG.

20. The method of claim 19, wherein the subunit is α hCG or β hCG.

21. The method of claim 18, wherein the hCG is intact hCG.

22. The method of claim 18, wherein the hCG is total hCG.

23. A method of detecting the presence or absence of a germ cell tumor in a biological sample comprising the steps of:

a. obtaining a biological sample from a patient;

b. measuring an amount of hCG in the biological sample;

c. measuring an amount of ITA in the biological sample; and

d. determining the percentage of hCG that is ITA, wherein a germ cell tumor is detected if the percentage is 30% or greater.

24. The method of claim 23, wherein the hCG is a subunit of hCG.

25. The method of claim 24, wherein the subunit is α hCG or β hCG.

26. The method of claim 23, wherein the hCG is intact hCG.

27. The method of claim 23, wherein the hCG is total hCG.

28. The method of claim 23, wherein the germ cell tumor is an ovarian germ cell tumor.

29. The method of claim 28, wherein the ovarian germ cell tumor is dysgerminoma.

30. The method of claim 23, wherein the germ cell tumor is a testicular germ cell tumor.

31. The method of claim 30, wherein the testicular germ cell tumor is seminoma or choriocarcinoma.

32. A method of detecting the presence or absence of a germ cell tumor in a biological sample comprising the steps of:

    a. obtaining a biological sample from a patient; and

    b. measuring an amount of ITA in the biological sample; wherein a germ cell tumor is detected if the amount of ITA in the biological sample is 2 IU/L or greater.

33. The method of claim 32, wherein the germ cell tumor is an ovarian germ cell tumor.

34. The method of claim 33, wherein the ovarian germ cell tumor is dysgerminoma.

35. The method of claim 32, wherein the germ cell tumor is a testicular germ cell tumor.

36. The method of claim 35, wherein the testicular germ cell tumor is seminoma or choriocarcinoma.

37. A method of monitoring the progression of a germ cell tumor comprising the steps of:

    a. obtaining a biological sample from a patient diagnosed as having a germ cell tumor;

    b. measuring an amount of hCG in the biological sample;

    c. repeating steps (a) and (b) with a biological sample obtained at subsequent time points;

    d. measuring an amount of ITA in a biological sample from step (c) if the amount of hCG in a biological sample from step (c) is higher than the amount of hCG in step (b); and

    e. determining the percentage of hCG that is ITA in the biological sample from step (d).

38. The method of claim 37, wherein the hCG is a subunit of hCG.

39. The method of claim 38, wherein the subunit is α hCG or β hCG.

40. The method of claim 37, wherein the hCG is intact hCG.

41. The method of claim 37, wherein the hCG is total hCG.

42. The method of claim 37, wherein the germ cell tumor is an ovarian germ cell tumor.

43. The method of claim 42, wherein the ovarian germ cell tumor is dysgerminoma.

44. The method of claim 37, wherein the germ cell tumor is a testicular germ cell tumor.

45. The method of claim 44, wherein the testicular germ cell tumor is seminoma or choriocarcinoma.